Water Quality Monitoring
in the Southern Plains Network

Importance / Issues

Surface water quality is important to maintain a healthy habitat for many aquatic organisms, wildlife, and humans. Water quality can provide insights into overall system productivity, can shift species abundances and distributions, and alter nutrient cycles. Water quality parameters such as pH, conductivity, dissolved oxygen, and temperature are good measurements that provide an overview of water quality. Biological contamination from Escherichia coli is a threat to water quality in SOPN parks. Sources include treated effluent, septic systems, and livestock operations. E. coli can be further exacerbated by a decrease in water quantity, which can concentrate pollutants. Water quality monitoring is required to ensure visitor health and safety in SOPN parks, to comply with relevant environmental legislation and NPS mandates, and to evaluate potential biochemical stressors in SOPN water bodies.

Preliminary Monitoring Objective

1. Determine the long-term trends in core (temperature, turbidity, dissolved oxygen, pH) water quality parameters at SOPN water bodies.

2. Determine fecal coliform levels and trends.

Sampling water quality at Lyndon B. Johnson NHS

Pecos River

Potential Measures

Soil nutrient (C, N, P) levels, soil classification, rates of erosion, percent cover of bare soil.

Protocol Development & Status

A cooperative agreement has been developed with Texas State University to develop surface water quantity, surface water quality, and ground water quantity monitoring protocols. The planned completion date for the protocol is October 2007.

Contact Information

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